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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,416	12/23/2005	Patrick K. Sullivan	HOANA-72375	3877
7550 12/19/2008				
Craig B Bailey Fulwider Patton Howard Hughes Center 10th Floor 6060 Center Drive Los Angeles, CA 90045			EXAMINER NATNITHITHADHA, NAVIN	
			ART UNIT 3735	PAPER NUMBER
			MAIL DATE 12/19/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/562,416

**Applicant(s)**

SULLIVAN, PATRICK K.

**Examiner**

NAVIN NATNITHADHA

**Art Unit**

3735

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-26 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 25 July 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-893)  
4) ☐ Interview Summary (PTO-413)  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_  
Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. According to the Amendment, filed 25 July 2008, the status of the claims is as follows:

Claims 1, 3, 5-7, 11, 14, and 16-26 are currently amended; and

Claims 2, 4, 8-10, 12, 13, and 15 are as originally filed.

2. The objection to Drawings are WITHDRAWN in view of the Replacement Sheets, filed 25 July 2008.

3. The objections to claim 3 is WITHDRAWN in view of the Amendment, filed 25 July 2008.

### ***Response to Arguments***

4. Applicant's arguments, see Remarks, p. 8, filed 25 July 2008, with respect to the objection of the Substitute Specification, filed 23 February 2006, for not including the Preliminary Amendment, filed 23 December 2005, have been fully considered, and are persuasive. The objection of the disclosure has been withdrawn.

5. Applicant's arguments, see Remarks, pp. 8-10, filed 25 July 2008, with respect to the objection of the disclosure and claims 1-26 because the Applicant's disclosure and claims uses the word "discretized", which is not a word defined in any dictionary, have been fully considered, and are persuasive. The objections of the disclosure and the claims have been withdrawn.

6. Applicant's arguments, see Remarks, p. 11, filed 25 July 2008, with respect to the rejection of claims 1-26 under 35 U.S.C. 102(b) as being anticipated by John et al, U.S. Patent No. 4,974,598 A ("John"), have been fully considered, but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-10, 13-23 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Halperin et al, U.S. Patent No. 7,314,451 B2 ("Halperin").

Claims 14-23 and 26: Halperin teaches the following:

A radiation stress, non-invasive vital sign monitoring device (see Abstract and figs. 1, 2, 4A-C, 18) comprising:

one or more discretized sensor arrays 110 and 30 for measuring and collecting discretized acoustic or electromechanical signals from a patient (see col. 48, l. 61, to col. 49, l. 6),

a surface on the one or more discretized sensor arrays for engaging a patient (see col. 3, l. 62, to col. 4, l. 16, and col. 4, ll. 27-38),

a transmission system for transmitting data collected by the one or more discretized sensor arrays (arrows between motion sensor 30 and/or acoustic sensor 110, see fig. 2),

a receiving device 20 for receiving the transmitted data from the one or more discretized sensor arrays (see fig. 2), and

a computing device 16 connected to the receiving device 20 for calculating values of vital signs of the patient by producing time series data from various discretized sensor array signals (see col. 43, ll. 21-32, and col. 44, ll. 21-33),

calculating energy spectrum from the time series data (see col. 60, l. 62, to col. 61, l. 29), and

determining variance of each discretized sensor array (see col. 62, l. 49, to col. 62, l. 27);

wherein the vital signs are average, mean, systolic and diastolic arterial blood pressure, and hypertension (see col. 32, ll. 30-37, and col. 42, ll. 14-34);

wherein the patient lies on, stands on, or otherwise contacts the discretized sensor arrays (see fig. 1 and col. 43, ll. 32-59);

wherein the discretized sensor arrays collect the discretized acoustic or electromechanical signals over a range of frequencies or a single frequency (see col. 43, ll. 21-59);

wherein the discretized sensor arrays collect the discretized acoustic or electromechanical signals in a time domain or frequency domain (see col. 18, ll. 45-57);

wherein the computing device calculates a value for vital signs with non-time series methods for determining energy at various array points or a combination of array points (see col. 60, l. 62, to col. 61, l. 29);

wherein the transmission system transmits discretized signals via wire, fiber optics or wirelessly (see fig. 2, and col. 44, ll. 34-42);

wherein the discretized sensor arrays provide continuous, real-time monitoring of a patient's vital signs (see col. 53, ll. 55-62);

wherein the one or more discretized sensor arrays are not attached to the patient (see fig. 1).

Claims 1-10 and 13: Because the method of claims 1-10 and 13 are not distinct from the apparatus of claims 14-13 and 26, the method of claims 1-10 and 13 are anticipated by Halperin for the same reasons as above for claims 14-23 and 26.

#### ***Allowable Subject Matter***

8. Claims 11, 12, 24, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

Claims 11, 12, 24, and 25: The prior art of record does not teach the method of claim 1 or the device of claim 14, including calculating/computing the momentum flux from data

gathered from the discretized sensor arrays, and calculating/computing a patient's vital signs from the momentum flux.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The other patents cited in the PTO-892 teach subject matter related to the Applicant's claims. The Examiner suggests reviewing these patents before responding to the present Office Action.

11. Applicant's amendment, filed on 25 July 2008, necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAVIN NATNITHITHADHA whose telephone number is (571)272-4732. The examiner can normally be reached on Monday-Friday, 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on (571) 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles A. Marmor, II/  
Supervisory Patent Examiner  
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/N. N./  
Patent Examiner, Art Unit 3735  
12/17/2008